

# Aquapulse - AQ1B

## Underwater metal detector system

### Options and Accessories



*Aquascan International Limited*

Aquascan International Ltd  
Aquascan House  
27A Hill Street  
Newport  
South Wales  
NP20 1LZ UK  
Phone: +44 (0)1633 841117  
Fax: +44 (0)1633 254829  
E-mail: [info@aquascan.co.uk](mailto:info@aquascan.co.uk)

The Aquapulse metal detector is a rugged and completely modular system. The module is rated to 100m depth in water, and has 3 mounting options available.

The Ikelite connector system and dual controls on the control module allow for use with any of our range of AQ1B accessories. That way, you can use the optimum search loop and audio device for each job.

The built in NiMH battery has enough capacity for over 10 hours of continuous operation.

This new compact version is much lighter than previous versions, and has a greater resilience to the tough underwater environment.



April 2018

# Standard systems



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## **AQ.1.020 Standard 20cm (8'') kit**

Consists of control module, quick releaser harness, bonephone, battery charger and 20cm (8'') loop with stem.

This is the most compact and economical version in the Aquapulse 1B range. The short folding stem allows the diver to stow the loop until required.

This version has the highest sensitivity to very small gold items due to the more focussed sensing area.

## **AQ.1.030 Standard 25cm (10'') kit**

Consists of control module, quick release harness, bonephone, battery charger and 20cm (10'') loop with extending handle.

This version has a slightly more powerful sensing loop than the 20cm kit and longer reach due to the extending handle.

The extending handle allows for short duration use for beach and land searches. For extended use on land the armsaver assembly - as supplied with the 38cm kit—is a more practical solution.



## **AQ.1.010 Standard 38cm (15'') kit**

Consists of control module, quick release harness, bonephone, battery charger, 38cm (15'') loop and armsaver assembly.

This version is the most powerful general purpose search tool due to the large field of energisation created by the 38cm loop. This version allows a very wide sweep width—approx 3m (10ft) and deep penetration into all types of bottom material.

# Commercial systems



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## AQ.1.0XX\_C

### Commercial system

This system comprises the best elements of the Aquapulse range, all housed in a strong waterproof Peli style case

The system contains the following Aquapulse components:

Aquapulse module,

Bonephone,

AC charger,

Underwater headphones,

90cm probe,

D ring attachment system,

Waist belt mount,

Waterproof Peli style case with custom foam.

15" search loop, and armsaver (AQ.1.010\_C)

OR

10" search loop and extending handle (AQ.1.030\_C)



This system is the minimum preferred setup for commercial diving operations due to the specification, ease of transportation and storage. (AQ.1.010\_C shown below)



# Professional systems



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## AQ.1.0XX\_P Professional system

The professional versions of the 25cm (10") and 38cm (15") provide the ultimate search tools for the discerning diver. The provision of a high power ferrite probe instead of the standard probe means that greater detection capabilities in nooks and crannies are available.. As with our other systems, this is housed within a waterproof case. All loops and probes are fitted with our high endurance "Red" cable. Also included is our Palm Coil (AQ.3.045) (AQ.1.010\_P 38cm (15") Professional system pictured below)  
Note that the below picture does not show the red cable.



## Accessories—Audio



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### **AQ.4.061 Bonephone**

Fully waterproof bonephone utilises an Ikelite underwater connector for use with the AQ1B control module.

Normally places against the skull at the back of, or below the ear whilst underwater enabling the diver to clearly hear the change in the detector tone when metal is sensed.

### **AQ.4.030 Land headphones**

Rugged headphones for use above water enabling the AQ1B to be utilised as a powerful land detector.

The headphones feature an adjustable volume control and a comfortable fit for the operator.



### **AQ.4.031 Underwater Headphones**

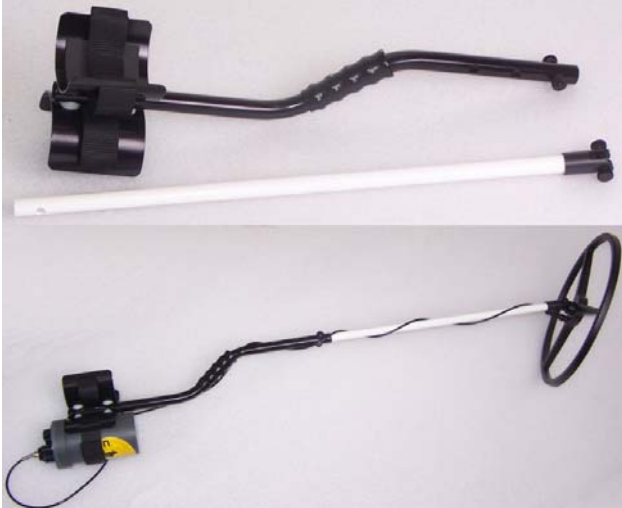
Rugged headphones for use underwater giving an alternative for the bonephone. These are particularly useful in warm waters where a diving hood is not normally worn. They also provide a more powerful sound level that can enhance the ability to sense even the most subtle changes in the audible output.



# Accessories - Mounting



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## **AQ.4.000 Armsaver**

This 2 part set is normally used in conjunction with a 38cm loop, but it will also work with the 20cm and 25cm loops. A set of Velcro straps secure the armsaver to the users arm and enable the user to comfortably support a loop for long periods of time.

The AQ1B control module can be securely mounted to the lower cup of the armsaver (as shown).

(AQ1B and loop not supplied)

## **AQ.4.001 Extending Handle**

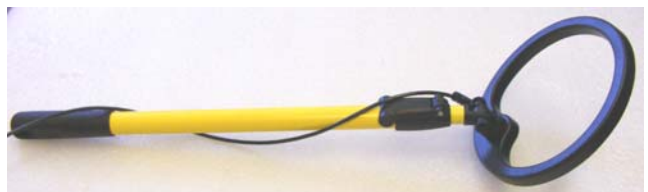
Normally used in conjunction with the 25cm (10") loop (but will also work with the 20cm and 38cm loops), this GRP handle is fully adjustable from 60cm to 102cm (24" to 40").

Picture shows fully extended handle attached to a 25cm loop (not included)



## **AQ.4.002 Quick release handle**

This short handle is designed to be used with a 20cm (8") search coil (AQ.3.001) when it is to be stored in our waterproof case. This comes as standard in Professional systems.



## Accessories - Sensing

Sensors marked with a \* are available with a high endurance "Red" cable upgrade by adding the suffix **\_R** to the order code.



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### **AQ.4.080 \*** **20cm (8'') loop**

Fully waterproof compact search loop with 30cm (12'') short stem. Ideal for finding smaller items due to the concentrated search area.

### **AQ.3.001 \*** **20cm (8'') loop with 2m cable**

Same loop as AQ.4.080, but without the handle. This can be used with the extending handle (AQ.4.001), armsaver (AQ.4.000) or the quick release handle (AQ.4.002)

### **AQ.3.002 \*** **25cm (10'') loop**

Fully waterproof robust, mid-sized search loop offering an alternative to the 20cm and 38cm loops.  
Normally used with the extending handle (AQ.4.001)



### **AQ.3.003 \*** **38cm (15'') loop**

Fully waterproof large search loop. This gives the largest sensing range and when used with the armsaver gives a good sweep range underwater and a good balanced unit for land use.

## Accessories - Sensing

Sensors marked with a \* are available with a high endurance "Red" cable upgrade by adding the suffix **\_R** to the order code.



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### **AQ.3.004** **38cm (15'') loop with 20m cable**

This is the same as the AQ.3.003, but has a 20metre (65ft) length of reinforced cable. The extended length of cable allows the loop to be slowly towed behind a boat or simply lowered down for drift searching. This system of operation allows metallic contact areas to be located prior to deploying a diver.

This item is indispensable for extended shallow water searches in low visibility conditions.

### **AQ.3.040 \*** **30cm (12'') probe**

Fully waterproof probe, 30cm (12'') in length, for searching in small crevices and for digging amongst sand and silt. The diameter of this is 22mm (7/8'').



### **AQ.3.041 \*** **90cm (36'') probe**

Same as AQ.3.040, but with greater length, adjustable up to 90cm (36'') for deeper crevices.

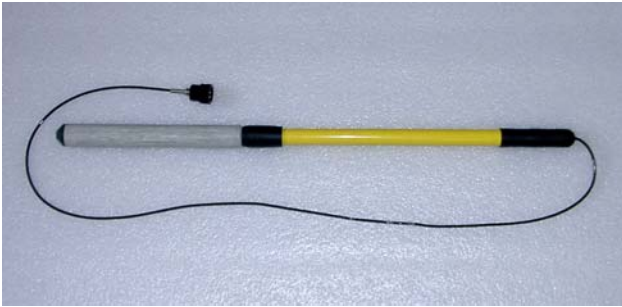


## Accessories - Sensing

Sensors marked with a \* are available with a high endurance “Red” cable upgrade by adding the suffix **\_R** to the order code.



### **AQ.3.042 \*** **4cm (1 1/2”) High Power probe**



This is a much higher power probe than the AQ.3.040/1. The diameter is 4cm, and is virtually as powerful as the 20cm (8”) loop. This extends to 1.1m (43”) total length.

### **AQ.3.044 \*** **4cm (1 1/2”) High Power probe** **(for Peli case)**

As above, this is the same probe but with a shorter handle to allow it to be housed within our waterproof case.. This version extends to 900mm (35 1/2”) from 620mm (24”)



### **AQ.3.043** **4cm (1 1/2”) High Power probe** **With 30m cable**

This version of the AQ.3.042 has a 30m (100ft) reinforced cable. This enables the probe to be lowered into deep ravines to search for metal without a diver having to go down.

## Accessories - Sensing



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### **AQ.3.007** **Miniature "Palm Coil"**

This mini coil is designed to be the size of one of our bonephones. It measures 44mm (1 3/4") diameter, and 14mm (9/16") thick.

This coil is designed to be worn inside a glove in a search area covered with clods of various types. The idea is that the diver can pick up 1 clod at a time and discover instantly whether metal is hidden inside or not.

The Palm Coil is also included in our AQ.1.0xx\_P Professional systems

For detection distances, please see the back page of this brochure.

## Accessories - Other



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### **AQ.4.010/1/2/5 Mains battery charger**



This is the mains charger for the Aquapulse. Rated for 100v to 240v, it is supplied with either a British, European, Northern US or Australian power connector. The figure-of-8 connector enables use of other country-specific mains leads if required.

The charger will fully recharge a flat battery pack in 14 hours. In built safety means that you can leave the charger on the Aquapulse for longer periods without damage.

### **AQ.2.010 AQ1B control module**

This is the heart of the Aquapulse system. It has 2 controls that allow adjustment based on the search loop fitted, and the ability to remove “clutter” such as ring pulls etc. The Ikelite connectors are very robust and allow quick change-over between loops and audio devices. Rated to 100m depth.

Height - 190mm (7 1/2”)

Diameter (max) - 100mm (4”)

Weight - 1kg (max)



AQ1B module not included

### **AQ.5.011 Waist belt**



Using the fast and secure Velcro system, this adjustable belt with quick release buckle is an ideal mounting option and supplied as standard with any kit.

### **AQ.5.012 D ring**

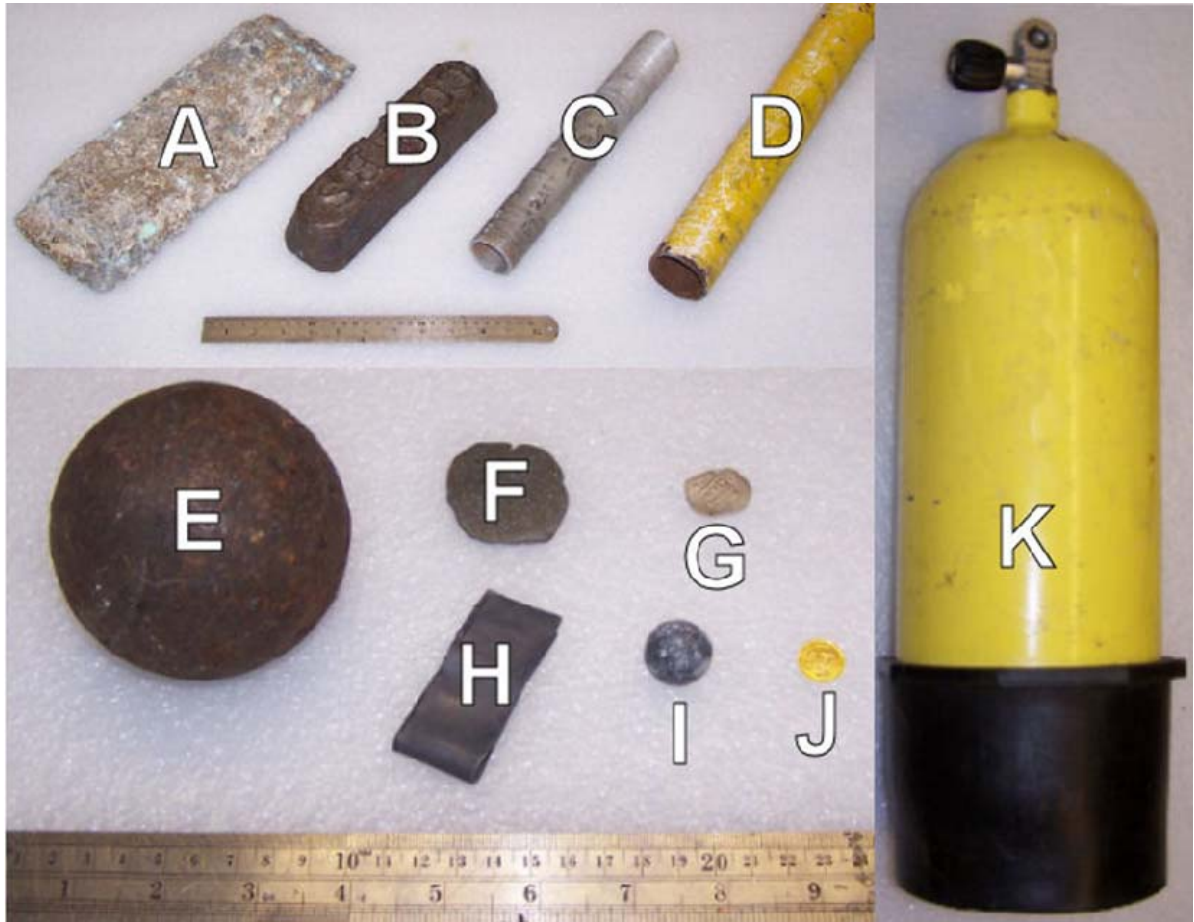
Using the fast and secure Velcro system, the D ring allows the control module to be attached to a Karibiner

# Test Items

(for detection ranges on next page)



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## AQ1B Test Objects

	Description	Size (metric)	Size (imp)	Weight (metric)	Weight (imp)
A	Tin Ingot	130mm x 360 mm	5" x 14"	12.7Kg	28lbs
B	Copper Ingot	70mm x 280mm	2 3/4" x 11"	7Kg	15 lbs 8 oz
C	Aluminium pipe	50mm dia	2" dia	440g	1lb
D	Steel pipe	60mm dia	2 3/8" dia	2Kg	4 lbs 6 oz
E	Cannon ball	80mm dia	3" dia	1.8Kg	4lbs
F	8 Reales coin	40mm dia	1 1/2" dia	23g	3/4 oz
G	1 Real coin	20mm dia	3/4" dia	1g	1/25 oz
H	Lead strip	25mm x 60mm	1" x 2 1/4"	55g	2oz
I	Musket shot	20mm dia	3/4" dia	48g	1 7/10 oz
J	Gold coin (24 carat)	15mm dia	9/16" dia	1g	1/20 oz
K	Steel dive cylinder	180mm x 500mm	7" x 20"	12.7 Kgs	28lbs

# Detection ranges



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## Aquapulse 1B Detection distances

Test sensor	Test object												
	Tin ing.	Copper ing.	Alu pipe	St. pipe	Cannon B	8 Reales	1 Real	Lead strip	Musket shot	Gold coin	Dive cyl.		
	A	B	C	D	E	F	G	H	I	J	K		
Palm coil (mm)	400	300	280	500	370	210	160	250	180	150	600		
<b>Palm coil (inches)</b>	<b>15.75</b>	<b>11.81</b>	<b>11.02</b>	<b>19.69</b>	<b>14.57</b>	<b>8.27</b>	<b>6.30</b>	<b>9.84</b>	<b>7.09</b>	<b>5.91</b>	<b>23.62</b>		
8" coil (mm)	800	600	550	900	700	400	275	500	350	275	1200		
<b>8" coil (inches)</b>	<b>31.50</b>	<b>23.62</b>	<b>21.65</b>	<b>35.43</b>	<b>27.56</b>	<b>15.75</b>	<b>10.83</b>	<b>19.69</b>	<b>13.78</b>	<b>10.83</b>	<b>47.24</b>		
10" coil (mm)	900	675	650	1100	850	450	300	550	375	275	1300		
<b>10" coil (inches)</b>	<b>35.43</b>	<b>26.57</b>	<b>25.59</b>	<b>43.31</b>	<b>33.46</b>	<b>17.72</b>	<b>11.81</b>	<b>21.65</b>	<b>14.76</b>	<b>10.83</b>	<b>51.18</b>		
15" coil (mm)	1100	800	750	1300	1000	600	350	625	475	325	1700		
<b>15" coil (inches)</b>	<b>43.31</b>	<b>31.50</b>	<b>29.53</b>	<b>51.18</b>	<b>39.37</b>	<b>23.62</b>	<b>13.78</b>	<b>24.61</b>	<b>18.70</b>	<b>12.80</b>	<b>66.93</b>		
Ferrite probe (mm)	450	350	300	600	430	220	170	300	200	150	700		
<b>Ferrite probe (inches)</b>	<b>17.72</b>	<b>13.78</b>	<b>11.81</b>	<b>23.62</b>	<b>16.93</b>	<b>8.66</b>	<b>6.69</b>	<b>11.81</b>	<b>7.87</b>	<b>5.91</b>	<b>27.56</b>		
H/P ferrite (mm)	625	500	450	800	600	300	225	375	250	175	1000		
<b>H/P ferrite (inches)</b>	<b>24.61</b>	<b>19.69</b>	<b>17.72</b>	<b>31.50</b>	<b>23.62</b>	<b>11.81</b>	<b>8.86</b>	<b>14.76</b>	<b>9.84</b>	<b>6.89</b>	<b>39.37</b>		
2" Jet probe (end on) (mm)	450	350	320	500	425	225	175	280	180	130	750		
<b>2" Jet probe (end on) (inches)</b>	<b>17.72</b>	<b>13.78</b>	<b>12.60</b>	<b>19.69</b>	<b>16.73</b>	<b>8.86</b>	<b>6.89</b>	<b>11.02</b>	<b>7.09</b>	<b>5.12</b>	<b>29.53</b>		
2" Jet probe (lateral) (mm)	350	250	250	400	350	175	120	20	140	110	575		
<b>2" Jet probe (lateral) (inches)</b>	<b>13.78</b>	<b>9.84</b>	<b>9.84</b>	<b>15.75</b>	<b>13.78</b>	<b>6.89</b>	<b>4.72</b>	<b>0.79</b>	<b>5.51</b>	<b>4.33</b>	<b>22.64</b>		

Detection distance determined by a doubling of the tickover speed